

# caArray

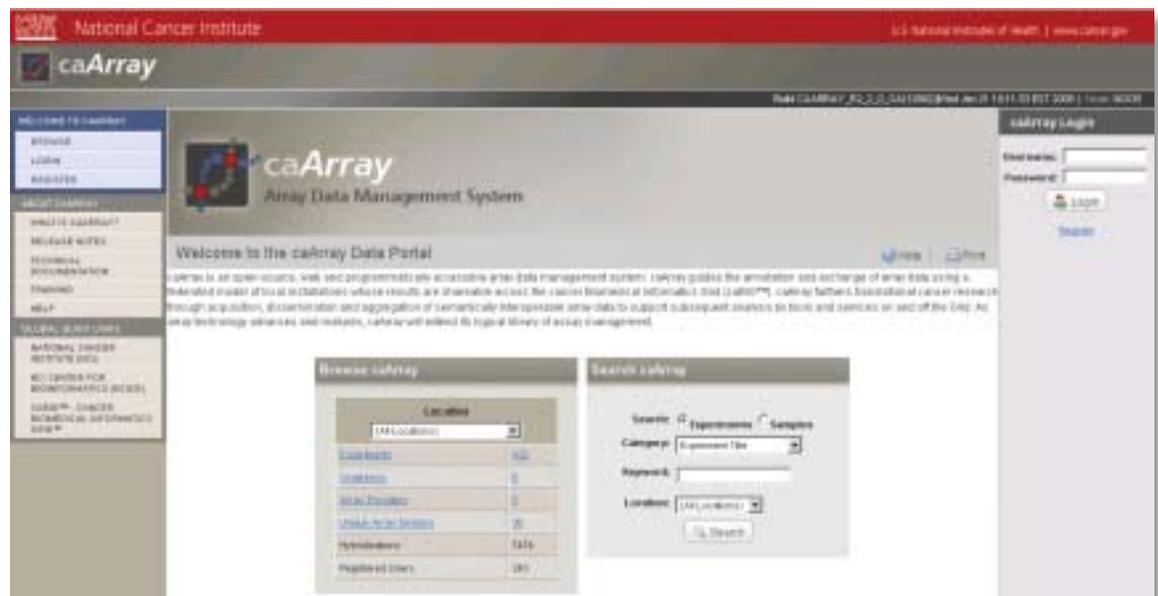
## Microarray data management system

caArray is an open-source, role-based, Web- and programmatically-accessible array data management system. caArray enables the annotation and exchange of array data using a federated model of local installations whose data are shareable across the cancer Biomedical Informatics Grid (caBIG®).

As a grid data service, caArray furthers translational cancer research through acquisition, aggregation and dissemination of semantically interoperable array data to support subsequent analysis by tools and services on and off the Grid. As array technology advances and matures, caArray will extend its library of assay management capabilities.

### Features

- Use Web-based forms to submit and annotate data consistent with MIAME guidelines
- Import multiple MAGE-TAB files
- Publish data to the public domain using group-based permission schemes
- Submit and retrieve Affymetrix, GenePix, and Illumina native expression array files
- Submit and retrieve Affymetrix and Illumina native SNP array files



caArray interface

### Categories of Use

- |  |   |  |   |
|--|---|--|---|
| <input type="checkbox"/> Biospecimens                      | <input checked="" type="checkbox"/> <b>Data Sharing</b> | <input type="checkbox"/> Imaging                       | <input type="checkbox"/> Proteomics             |
| <input type="checkbox"/> Clinical Trials Management        | <input type="checkbox"/> Genome Annotation              | <input checked="" type="checkbox"/> <b>Microarrays</b> | <input type="checkbox"/> Translational Research |
| <input type="checkbox"/> Data Analysis & Statistical Tools | <input type="checkbox"/> Infrastructure                 | <input type="checkbox"/> Pathways                      | <input type="checkbox"/> Vocabularies           |



## Architecture Overview

- **Application type:** Web application–remote application with data uploads/downloads through Web interface
- **System requirements:** While caArray is a Web-based application, it does have a dependent software stack that includes MySQL database, a JBoss middle tier server, optional LDAP server for non-database authentication, and network infrastructure (LAN)

## Installation and Administration

- **Skill sets needed:** System administration and full access rights to the deployment environment; these may include Unix root access as well as database administrator access
- **Infrastructure needed:** The installation checks for existing environment dependencies and either respects them if they exist or acquires the corresponding versions of JBoss and MySQL
- **Long-term administration needs:** Updates will be provided through GUI installers

## Key Contributors:

- 5AM Solutions
- Columbia University
- Jackson Labs
- Lawrence Berkeley National Laboratory
- NARTec
- NCI Center for Bioinformatics and Information Technology
- Science Applications International Corporation
- TerpSys
- Washington University

## Other Life Sciences Distribution Components:

- Cancer Genome-Wide Association Studies (caGWAS)
- caTissue Core
- Clinical Trials Object Data System (CTODS)
- geWorkbench
- National Cancer Imaging Archive (NCIA)

## Resources

<b>Tool Overview Page</b>	<a href="https://cabig.nci.nih.gov/tools/caArray">https://cabig.nci.nih.gov/tools/caArray</a>
<b>Primary Workspace</b>	Integrative Cancer Research (ICR) <a href="https://cabig.nci.nih.gov/workspaces/ICR">https://cabig.nci.nih.gov/workspaces/ICR</a>
<b>Knowledge Center</b>	<a href="https://cabig-kc.nci.nih.gov/Molecular/KC/index.php/Main_Page">https://cabig-kc.nci.nih.gov/Molecular/KC/index.php/Main_Page</a>
<b>caArray Users LISTSERV</b>	<a href="https://list.nih.gov/archives/caarray_users-l.html">https://list.nih.gov/archives/caarray_users-l.html</a>
<b>caBIG® Tool Inventory</b>	<a href="https://cabig.nci.nih.gov/inventory">https://cabig.nci.nih.gov/inventory</a>
<b>NCI Center for Bioinformatics Applications Support</b>	<a href="mailto:ncicb@pop.nci.nih.gov">ncicb@pop.nci.nih.gov</a>



**NIH Publication No. 09-7437**  
**Printed May 2009**

